REMARKS

Claims 1-10 are currently active.

The Examiner has rejected Claims 1-10 as being anticipated by Casey. Applicants respectfully traverse this rejection.

Referring to Casey, there is disclosed an Internet protocol virtual private network realization using multi-protocol label switching tunnels. Casey teaches network providers are offering virtual private networks to interconnect various customer sites that are geographically dispersed. Virtual private networks are of great interest to both providers and to their customers because they offer privacy and cost efficiency through network infrastructure sharing. There has been difficulty providing this service, however, due to address conflicts, security problems, scalability issues and performance problems. See column 1, lines 24-30. Casey teaches that these problems may be solved by virtual private networks which enable private communication over a shared MPLS network, between at least two private networks. See column 1, lines 61-64.

Casey teaches an MPLS network. A service provider or consortium of service providers wishing to offer IP virtual private network service first configures one or more MPLS domains. Each MPLS demand becomes a virtual private network area. The provider determined

routing regime determines routes within the MPLS domain and then, as per normal MPLS operation, label distribution protocol is invoked to establish implicit label distribution protocols across the MPLS domain which include the intermediate hops required to get from one border router 10 to another border router 10.

After the MPLS network is configured, the providers can configure the virtual private network. To do so, the providers select border routers 10 from the MPLS domain that will serve virtual private network and configures a virtual router at each one by assigning it an id. The provider then provisions stub links. Stub link interfaces are assigned IP addresses from the private networks IP address space. The LDP session initiation process is used as the method of virtual routers discovering their peers to establish a second level of MPLS tunnels. Every virtual router sends an LDP hello message down every base network LSP that exits its VR. Hello messages are encapsulated with the base MPLS label so that they are carried all the way to destination VBR 10.

When a hello adjacency is registered, the relevant virtual router proceeds to initiate an LDP session with its peer. As a result of routing exchanges between peer virtual routers and between virtual routers and private network routers, each virtual router will build a forwarding table that relates private network to address prefixes to the next hop. The next hop to

be stored as the IP addresses of the end points in the nested LSP tunnel to be used, where it could just be the tunnel labels. See column 4, lines 50-57.

When IP packets arrive this next hop is a VBR 10, the forwarding process pushes first label 40 for the peer virtual router. Then the base level 50, for the first hop of the base network LSP that leads to the VBR 10, is pushed onto the packet. The doubly labeled packet is then forwarded to the next LSR and the base network LSP. When the packet arrives at the destination VBR 10, the outer most label 50 may have changed several times, but the nested label 40 has not changed. As a label stack is popped, the nested label 40 is used to direct the packet to the correct virtual router.

From the above description, it is clear that the limitations of Claim 1 are not taught or suggested by Casey. It is respectfully submitted that Casey does not teach "a memory divided into a configurable number of context areas for a corresponding set of virtual private routed networks, each context area including a routing table and the associated routing protocol state information for the corresponding VPRN".

Casey does not teach or suggest "a set of one or more routing tasks, the set including at least one routing task for each different type of routing protocol to employ in the set of VPRN's, each routing test being operable only with a separate routing table and with

separate routing protocol state information to realize the corresponding virtual router to carry out associated routing operations in the VPRN".

Casey does not teach or suggest "context selection logic operative to selectively couple the routing tasks to the different context areas of the memory to realize a set of virtual routers, each virtual router being associated with the corresponding one of the VPRNs".

In relevant part, on page 3 of the Office Action, the Examiner refers to the limitation of Claim 1 of "a set of one or more routing tasks, the set including at least one routing task for each different type of routing protocol employed in the set of VPRNs, each routing task being operable only with a separate routing table and with separate routing protocol state information to realize a corresponding virtual router to carry out associated routing operations in a VPRN", emphasis added. The Examiner cites column 4, lines 10-15 and column 4, lines 51-55 of Casey as support for this limitation.

Referring to column 4, lines 10-15, it simply states "using a VR to exchange routing information with one or more enterprise site routers is the most general mechanism for disseminating private network reachability information. Part of the stub link configuration is to specify what routing protocol runs over it, between the private network router and the VBR 10."

Column 4, lines 51-55 simply states "as a result of routing exchanges between peer VRs and between VRs and private network routers, as appropriate, each VR will build a forwarding table that relates private network address prefixes (forward equivalency classes) to the next hop."

As is plainly evident from a review of this language and the teachings of Casey, the aforementioned limitation is nowhere to be found, let alone the limitation of "each routing task being operable only with a separate routing table". Accordingly, Casey cannot anticipate Claim 1 of applicants. It is respectfully submitted that the Examiner is reading this limitation into the teachings of Casey, where this limitation is simply not there.

Claims 2-5 are dependent to parent Claim 1 and are patentable for the reasons Claim 1 is patentable.

Claim 6 is patentable for the reason Claim 1 is patentable. Claims 7-10 are dependent to parent Claim 6 and are patentable for the reasons Claim 6 is patentable.

In view of the foregoing amendments and remarks, it is respectfully requested that the outstanding rejections and objections to this application be reconsidered and withdrawn, and Claims 1-10, now in this application be allowed.

Respectfully submitted,

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